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| 10/040,387 | 12/31/2001 | Takeshi Yokoe | P/289-168 | 2083 |

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| ART·UNIT | PAPER NUMBER |
|---|---|
| 2625 | |

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Office Action Summary | **Application No.** | **Applicant(s)** |
|---|---|---|---|
| | | 10/040,387 | YOKOE, TAKESHI |
| | | **Examiner** | **Art Unit** | |
| | | CHAN S. PARK | 2625 | |

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>09 January 2006</u>.

2a)☒ This action is **FINAL.**     2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

DOUGLAS Q. TRAN
PRIMARY EXAMINER

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

### *Response to Amendment*

1.      Applicant's amendment was received on 1/9/06, and has been entered and made

of record.  Currently, **claims 1-20** are pending.


### *Response to Arguments*

2.      Applicant's arguments filed 1/9/06 have been fully considered but they are not

persuasive.

In response to applicant's arguments regarding the rejection of **claim 2**, wherein

on pages 10 and 11, the applicant explains how the current invention differs from the

teaching of Gusmano and Osada.  Particularly, the applicant states that "*Osada does*

*not teach repeating printing a data block of a first print data on contingency of the lack*

*of a* printing request *from another print data source.  Nor does Osada discloses that a*

*printing request from another print data source can* interrupt an ongoing print job *after a*

*data block in the ongoing job is printed.*"  Examiner notes that the features identified are

not apparent in the current claim wording to distinguish the differences between the

current invention and the combination of Gusmano and Osada.  For example, step (b) is

completely silent as to 1) sending a printing request of the second print data to 2)

interrupt the ongoing print job.  The claim simply recites "repeating (a) if said second

print data source is *not producing said second print data*; and printing a data block of

said second print data if said second print data source is requesting a print of said

second print data."  Examiner notes that there is a vast difference between "not

producing said second print data" and "not requesting a print of said second print data."

Moreover, step (c) does not clearly distinguish that the request of the second print job

interrupts the ongoing print job. The examiner notes that the connections between the

steps (b) and (c) is not clear enough to support the applicant's arguments.

Therefore, the rejection of **claims 2-7**, in view of Osada in col. 24, line 65 – col.

25, line 8, is maintained and repeated in this Office Action.

Similar to the above, **claim 1** is maintained and repeated in this Office Action.

3.      Applicant's arguments with respect to **claims 8-20** have been considered but are

moot in view of the new ground(s) of rejection.

## Claim Objections

4.      Claim 20 is objected to because of the following informalities:

"a printer controller" should be -- said printer controller --.

## Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 8, 9 and 15 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

5.      Claim 8 recites "*assigning a first priority to said second source and a second
priority to said third source, wherein the first priority is higher than the second priority*".
It is uncertain as to whether the assigned priority change the order of the printing step.
What exactly does the priority do in the overall claimed method?  Does the priority affect
the order of the print data at all?   Is there any relationship between the priority and the
print data?   The applicant's remark appears to indicate that the ongoing print job is
interrupted based on the priority setting.  However, as noted above, the features
identified are not claimed to particularly point out and distinctly claim the applicant's
invention.

6.      With respect to claim 15, arguments analogous to those presented for claim 8,
are applicable.   Furthermore, the claim recites that first and second print requests are
received.  It is unclear if there is any relationship between the print requests and the
priority to interrupt the ongoing print job in the printer.  Where are those requests
coming from?  Are they from the same print data source?  How exactly is the first print
request different from the second print request?  Are they requesting the print of the
same print data?

7.      Claim 6 recites the limitation "a memory" in step a3).  There is insufficient
antecedent basis for this limitation in the claim.  It is unclear if this is referring to the
same memory recited in step a2).  If not, the distinction between should be clearly
claimed.

8.      With respect to claim 9, the claim recite "the second print data source is
requesting <u>a print</u> before a next data block in the first print data is printed."  Is the

second print data source requesting a print of the remaining first print data, the second

print data or other print data?

Furthermore, claim 9 is rejected under 35 U.S.C. 112, second paragraph, as

being incomplete for omitting essential structural cooperative relationships of elements,

such omission amounting to a gap between the necessary structural connections. See

MPEP § 2172.01.

The Specification appears to indicate that the interface must be enabled before

the control module can receive any print data. It is unclear as to how the print data can

be received if the interface is never enabled. In other words, what is stopping the

second print data from being printed before the next block in the first print data but after

the first block of first print data is printed? Moreover, is the claim assuming that the first

print data is received before the second print data? What if the second print data is

received before the first print data? Does the printer controller still wait until the first

print data is received <u>and</u> the data block in the first print data is printed? Examiner

believes that the essential conditions are omitted in order to perform the function as

claimed.

## *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gusmano et al. U.S. Patent No. 5,970,222 (hereinafter Gusmano) in view of Osada et al. U.S. Patent No. 6,600,569 (hereinafter Osada).

9.      With respect to claim 2, Gusmano teaches a printing method for first and second print data sources, said first and second data sources respectively producing first and second print data (col. 8, lines 31-47 & col. 9, lines 45-50), each of the print data being divided into a plurality of data blocks each containing multiple pages (Abstract), the method comprising:

a) printing a data block (first job segment) of said first print data when said first print data source is requesting a print of said first print data (step (a) of Abstract);

b) repeating (a) (step (b) of Abstract); and

c) printing a data block of said second print data if said second print data source is requesting a print of said second print data (printing of another job in the same way).

Gusmano, however, does not teach if said second print data stops repeating of step (a).

Osada, the same field of endeavor of network printing system, teaches a printing method for processing a plurality of print jobs, wherein each job includes priority information as to set which job should be printed first (col. 24, line 66 – col. 25, line 15).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement the priority setting method of Osada with the printing system of Gusmano.

The suggestion/motivation for doing so would have been to manage the plurality

of print jobs by the printing system.

Therefore, it would have been obvious to combine Gusmano with Osada to

obtain the invention as specified in claim 2.

10.     With respect to claim 3, Gusmano teaches the printing method, wherein a

number of said multiple pages contained in each of said data blocks of said first and

second print data are variable (col. 9, line 51 – col. 10, line 12).

11.     With respect to claim 4, Gusmano teaches the printing method, further

comprising (a) or (c) depending on whether said first print data source is requesting a

print of said first print data or said second print data source is requesting a print of said

second print data (requesting N copies to be printed in the Abstract).  Further, Osada

teaches the method for requesting a print of the first and second jobs (col. 24, line 66 –

col. 25, line 15).

12.     With respect to claim 5, Gusmano teaches the printing method, wherein each of

said first and second print data contains a command signal (requesting N copies), and

wherein (b) further comprises detecting the command signal in said first print data and

repeating (a) if the command signal is detect, and wherein (c) further comprises of

detecting the command signal in said second print data and repeating (c) if the

command signal is detected.  Further, Osada teaches the method of including priority

command in each of the print jobs (col. 24, line 66 – col. 25, line 15).

13.     With respect to claim 6, Osada teaches the printing method, further comprises:

a1) generating resource data from said data block of said first print data (col. 16, lines 33-44 & col. 8, lines 31-47 of Gusmano);

a2) storing the resource data in memory (rendering buffer);

a3) converting each page data to display data using the resource data stored in said memory (col. 16, lines 45-60); and

a4) clearing the resource data when the display data of said data block is printed (col. 16, lines 45-60 of Osada & abstract and col. 6, lines 15-28 of Gusmano).

As it is well known in the art, the rasterization of the print data taught by Osada must be done in the printing process.

14.     With respect to claim 7, Gusmano teaches the printing method, wherein each of said first and second print data contains configuration data for determining a plurality of print conditions, the method further comprising:

storing the configuration data (PDL & N copies commands) in a buffer; and

repeatedly using the stored configuration data when a display data of said data block is printed by either step (a) or step (c) (col. 8, lines 31-47).

Also, refer to fig. 9 of Osada.

15.     With respect to claim 1, as noted above in claims 2 and 6, the combination of Gusmano and Osada teaches a printing method comprising the steps of:

dividing print data of a first print data source into a plurality of data blocks (segments or packets) each containing a plurality of pages (abstract of Gusmano);

generating resource data from each data block and converting the page print

data of each block to display data by using the resource data (col. 16, lines 33-44 of

Osada & col. 8, lines 31-47 of Gusmano);

printing display data; and

clearing the resource data and granting permission to a print request from a

second print data source (col. 24, line 66 – col. 25, line 15) when the display data of the

first print data source has been printed (col. 16, lines 45-60 of Osada & abstract and col.

6, lines 15-28 of Gusmano).

As it is well known in the art, the rasterization of the print data taught by Osada

must be done in the printing process.

At the time of the invention, it would have been obvious to one of ordinary skill in

the art to implement the converter and the priority setting method of Osada into the

printing system of Gusmano.

The suggestion/motivation for doing so would have been to manage the plurality

of print jobs by the printing system.

Claim 8-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gusmano in view of Yamaguchi U.S. Patent No. 5,832,301.

16.     With respect to claim 9, Gusmano discloses printer controller comprising:

first and second interfaces (figs. 3 & 4) respectively connected to first and second

print data sources (interfaces connecting the scanner and the fax in fig. 3), said first and

second print data sources respectively producing first and second print data, each of the

first and second print data comprising a plurality of data blocks (segments or packets) each containing a plurality of pages (Abstract); and

a control module that receives the first print data from said first interface if said first print data source is requesting a print of said first print data for printing on a printer (copy command of the scanned data), and receives the second print data from said second interface for printing on said printer if said second print data source is requesting a print of said second print data (printing of the facsimile data transmitted to the printer). Also, read col. 8, lines 19-30.

Gusmano, however, does not discloses explicitly that the control module checks to see if the second print data source is requesting a print before a next data block in the first print data is printed.

Yamaguchi, the same field of endeavor of the printing art, discloses a printing system wherein a control module receives a plurality of print jobs from a plurality of print data sources and checks to see if print request of another print job is sent during a printing process of a particular print job (figs. 2 & 14).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the print interrupt request of Yamaguchi into the printer controller of Gusmano.

The suggestion/motivation for doing so would have been to print the urgent print data first even if the printer is busy printing the current print job.

Therefore, it would have been obvious to combine Gusmano with Yamaguchi to obtain the invention as specified in claim 9.

17.    With respect to claim 10, Yamaguchi discloses the printer controller, further comprising a converter that converts print data to display data, wherein said control module directs said converter to convert a data block of the first print data to display data and supplies the display data to the printer (col. 7, lines 1-6).

18.    With respect to claim 11, Gusmano discloses the printer controller, further comprising at least one buffer (packet buffer) for storing said data block of one of said first and second print data (col. 6, lines 1-14).

19.    With respect to claim 12, Gusmano discloses the printer controller, further comprising first and second buffers connected to the first and second interfaces, respectively, said first buffer (fig. 4) storing a plurality of data blocks of said first print data, and said second buffer (fig. 4) storing a plurality of data blocks of said second print data (col. 6, lines 14-28).

20.    With respect to claim 13, as set forth above, the combination of Gusmano and Yamaguchi discloses the control module:

      generates resource data from said data block of said first print data (col. 8, lines 31-47 of Gusmano);

      stores the resource data in memory (rendering buffer);

      converts each page data to display data using the resource data stored in said memory (col. 7, lines 1-6 of Yamaguchi); and

      clears the resource data when the display data of said data block is printed (abstract and col. 6, lines 15-28 of Gusmano).

As it is well known in the art, the rasterization of the print data taught by

Yamaguchi must be done in the printing process. Moreover, the method of

clearing/deleting of the resource data that has been printed is well-known in the art.

The conventional printers/copiers perform this function to free up the space for the later

incoming print data.

Thus, it would have been obvious to combine the converter of Yamaguchi with

the printing system of Gusmano to obtain the invention as specified in claim 13.

21.     With respect to claim 14, as set forth above, the combination of Gusmano and

Yamaguchi discloses the printer controller, further comprising a buffer, and wherein

each of said first and second print data contains configuration data for determining a

plurality of print conditions, further comprising the steps of:

storing the configuration data (PDL & N copies commands of Gusmano) in a

buffer; and

repeatedly using the stored configuration data when a display data of said data

block is printed by either step (a) or step (c) (col. 8, lines 31-47 of Gusmano).

Also, refer to fig. 8 of Yamaguchi.

22.     With respect to claim 20, Yamaguchi discloses the printing system comprising

said first and second print data sources and said printer controller, wherein the first print

data source is a host computer (fig. 1).

23.     With respect to claim 15, Gusmano discloses a printer controller comprising:

first, second and third interfaces (figs. 3 & 4) respectively connected to first,

second and third print data sources, said first, second and third print data sources

respectively producing first, second and third print data, each of the print data

comprising a plurality of data blocks (segments or packets) each containing a plurality of

pages (abstract); and

a control module for receiving a data block of said first print data from the first

interface for printing on a printer, receiving a data block of said second print data from

the second interface if a print request is received therefrom after printing has been

performed on the data block of the first print data for processing on said printer,

regardless of whether said third print data source is requesting a print of said third print

data, and receiving a data block of the third print data from the third interface if a print

request is received therefrom after printing has been performed on the data block of the

second print data.  It is noted that printing of print data from a host computer, a facsimile

machine and a scanner is performed by the printing system of Gusmano (col. 9, lines

43-50).  Hence, one print job after another can be performed in the system.

Gusmano, however, does not teach if said second print data stops the printing of

the first print data.

Yamaguchi, the same field of endeavor of network printing system, teaches a

printing method for processing a plurality of print jobs, wherein each job includes priority

information as to set which job should be printed first (fig. 14).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement the priority setting method of Yamaguchi with the printing system of Gusmano.

The suggestion/motivation for doing so would have been to manage the plurality of print jobs by the printing system.

Therefore, it would have been obvious to combine Gusmano with Yamaguchi to obtain the invention as specified in claim 15.

24.    With respect to claim 16, arguments analogous to those presented for claim 10, are applicable.

25.    With respect to claim 17, arguments analogous to those presented for claim 11, are applicable.

26.    With respect to claim 18, arguments analogous to those presented for claim 12, are applicable.

27.    With respect to claim 19, arguments analogous to those presented for claim 13, are applicable.

28.    With respect to claim 8, arguments analogous to those presented for claim 15, are applicable.

## *Conclusion*

29.    Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action.  Accordingly, **THIS ACTION IS MADE FINAL**.  See MPEP

§ 706.07(a).  Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action.  In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action.  In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

30.    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CHAN S. PARK whose telephone number is (571) 272-

7409.  The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Moore can be reached on (571) 272-7437.  The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Chan S. Park
Examiner
Art Unit 2625

csp
March 6, 2006

DOUGLAS Q. TRAN
PRIMARY EXAMINER